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## NO<sub>x</sub> RECLAIM WORKING GROUP MEETING

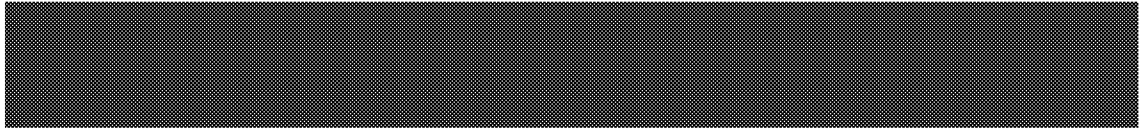
NOVEMBER 14, 2019  
SOUTH COAST AQMD  
DIAMOND BAR, CA  
CALL-IN #  
PASSCODE:

# Agenda

- Rulemaking Status on Landing Rules
- Update on Discussion with U.S. EPA on RECLAIM Transition

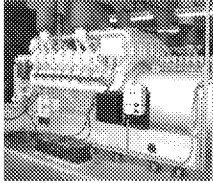


## RULEMAKING STATUS



# Rulemaking Status

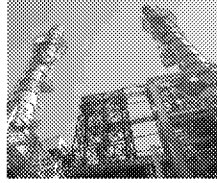
## PAR 1110.2



### **Gaseous- and Liquid-Fueled Engines**

- Amended Nov 1, 2019

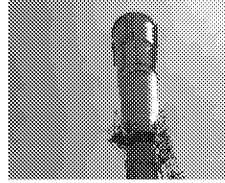
## PR 1109.1



### **Refinery Equipment**

- May 3, 2019 Board approved contracts for two third party consults for review of BARCT assessment
- Staff is close to completing BARCT assessment
- Public Hearing: 2<sup>nd</sup> Quarter 2020

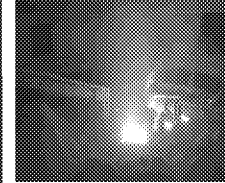
## PAR 218 & 218.1



### **Monitoring, Reporting, and Recordkeeping – Continuous Emissions Monitoring Systems**

- Applicable to non-RECLAIM and RECLAIM facilities
- Specifying CEMS requirements and performance standards
- Public Hearing: 1<sup>st</sup> Quarter 2020

## PAR 1117

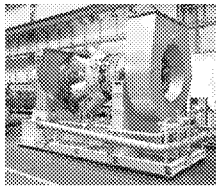


### **Glass Melting Furnaces**

- Affects 2 facilities
- Both using new NO<sub>x</sub> control equipment
- Public Hearing: 1<sup>st</sup> Quarter 2020

## Rulemaking Status (Continued)

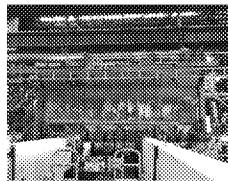
### PAR 1147



#### Miscellaneous Combustion Sources

- Conducting BARCT analysis – coordinate with PR 1147.1, 1147.2, and 1147.3
- Public Hearing: 1<sup>st</sup> Quarter 2020

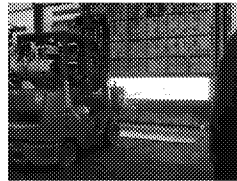
### PR 1147.1



#### Large Miscellaneous Combustion Sources

- Conducting BARCT analysis
- Public Hearing: 1<sup>st</sup> Quarter 2020

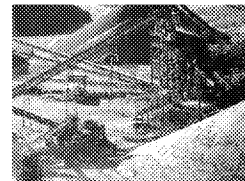
### PR 1147.2



#### Metal Melting Facilities

- Conducting BARCT analysis
- Public Hearing: 1<sup>st</sup> Quarter 2020

### PR 1147.3



#### Aggregate Facilities

- Staff in data gathering phase
- Public Hearing: 3<sup>rd</sup> Quarter 2020

[REDACTED]

## MEETING AT U.S. EPA REGION 9

[REDACTED]

- U.S. EPA and the Regulatory Flexibility Group met in person on October 22, 2019 to discuss issues regarding the RECLAIM transition
- U.S. EPA primarily in listening mode – provided some comments
- Other industry representatives and South Coast AQMD listened by teleconference
- Written comments by Regulatory Flexibility Group posted on South Coast AQMD's Proposed Rules Page site

[illegible]

## Discussion Topics by Regulatory Flexibility Group Regarding RECLAIM Transition

### New BARCT Standards

Balancing NOx BARCT Limits  
with New Ammonia Limits

Triggering NSR for Co-Pollutants

Availability of Alternative Emission Control Plans

### New Source Review and Anti-Backsliding Concerns

Viability of Retaining RECLAIM NSR

Requiring to Demonstrate that  
Emissions Remain Below Final Cap

NSR Holding Requirement

NSR Applicability Trigger

Methodology for Calculating Required Offsets

Use of South Coast AQMD Internal  
Bank to Satisfy NSR Offsets



## Industry Comment: Balancing NOx BARCT Limits with New Ammonia Limits

- Use of SCR to achieve proposed NOx BARCT can result in an increase in particulate matter emissions as a result of ammonia slip
- South Coast AQMD has proposed limits on ammonia slip to minimize particulate matter emissions
  - More challenging to achieve a more stringent the NOx standard with a lower ammonia slip

### Industry

### Recommendation:

Proposed NOx BARCT standards that are based on what has been achieved by other sources must consider the ammonia limits, or lack thereof, applicable to these sources

If proposed combination of NOx and ammonia limits have not been achieved, then a higher NOx limit needs to be considered if critical to limit ammonia slip

Co-pollutant trade-off should be taken into consideration when establishing BARCT

## Agency Responses: Balancing NOx BARCT Limits with New Ammonia Limits

### U.S. EPA Response:

It is South Coast AQMD's responsibility to establish Best Available Retrofit Control Technology (BARCT) emission limits

U.S. EPA's will review South Coast AQMD's SIP submittal in regards to meeting Reasonably Available Control Technology (RACT)

### South Coast AQMD Response:

Ammonia limits are specified in three BARCT rules (1134, 1135, 1146)

Ammonia limit was not specified in Rule 1110.2 – ammonia limit will be based on BACT on a case-by-case basis during permitting

Additional control technologies available, such as ammonia catalyst and feed forwards controls, can reduce ammonia emissions

## Industry Comment: Triggering NSR for Co-Pollutants

- Installation of SCR to control NO<sub>x</sub> emissions can result in increases of other pollutants (e.g. particulate matter emissions due to ammonia slip)
- Emission increases exceeding NSR threshold would require BACT, modeling, and offsetting
- Rule 1304 provides an offsetting exemption when complying with a BARCT rule provided there is no increase in maximum capacity – no exemption for BACT

Industry	Need relief from BACT for co-pollutants with emission increases associated with achieving BARCT for NO <sub>x</sub> because costs with meeting BACT for co-pollutants can exceed the cost of achieving NO <sub>x</sub> BARCT
Recommendation:	If no BACT exemption, then the cost associated with meeting BACT for co-pollutants must be factored into the cost-effectiveness for the proposed NO <sub>x</sub> BARCT

## Agency Responses: Triggering NSR for Co-Pollutants

### U.S. EPA Response:

No exemptions for BACT, but there is a federal exemption for offsets due to emission increases of co-pollutants, if project implements required controls

Federal major source and major modification thresholds for certain pollutants, which triggers BACT, are different from Regulation XIII thresholds

More stringent BACT thresholds potentially required under state law

### South Coast AQMD Response:

Further analysis and consideration needed to address concerns with BACT for co-pollutants

Considering need to address SOx RECLAIM

## Industry Comment: Availability of Alternative Emission Control Plans

- BARCT for command-and-control is based on concentration limits for individual pieces of equipment
- As a substitute to equipment-by-equipment BARCT standards for the RECLAIM transition, industry recommends development of alternative emission compliance plans (AECPs)

### Industry

### Recommendation:

Consider facilities under the same ownership as one entity for compliance purposes

Allow facilities to propose the best form of AECP for their specific operations

AECPs should include emission reduction targets based on the BARCT concentration requirements and timeline promulgated in the underlying landing rule

## Agency Responses: Availability of Alternative Emission Control Plans

### U.S. EPA Response:

Clean Air Act does not prohibit the use of some form of AECs

However, use of common ownership to combine multiple facilities under one cap is not allowed

### South Coast AQMD Response:

Alternative approaches have been incorporated in recently amended landing rules (e.g. an extended compliance schedule for full equipment replacements/facility modernization with near-zero technology)

Staff will look for opportunities for flexibilities so that overall reduction of mass emissions is achieved

## Industry Comment: Viability of Retaining RECLAIM NSR

- Primary focus for RECLAIM transition was to revise the BARCT component of the RECLAIM program – regulatory and statutory drivers did not mandate replacement of the RECLAIM NSR
- Transitioning RECLAIM facilities to a new NSR program or to Regulation XIII poses numerous challenges

Industry Recommendation:	Retain RECLAIM NSR (Rule 2005) post-RECLAIM
	Overlay command-and-control BARCT
	Support programmatic demonstrations if needed to retain RECLAIM NSR

## Agency Responses: Viability of Retaining RECLAIM NSR

U.S. EPA Response:	RECLAIM NSR by itself does not meet federal requirements and could not be approved by itself post-RECLAIM
	RECLAIM NSR was approved with the entire RECLAIM program and with special consideration of a declining cap
South Coast AQMD Response:	Based on discussions with U.S. EPA, facilities cannot exit RECLAIM until all aspects of the RECLAIM transition (e.g. landing rules, Regulation XIII – New Source Review, and Regulation XX - RECLAIM) are completed and SIP approved



## Industry Comment: Requiring to Demonstrate that Emissions Remain Below Final Cap

- U.S. EPA suggested an anti-backsliding demonstration showing that total actual emissions are below the aggregate supply of RTCs
  - Actual emission less than 14.5 tpd at the end of the RECLAIM program
  - Fulfills Federal Clean Air Act (CAA) Section 110(l) obligation
- U.S. EPA indicated that eliminating the cap is one reason why RECLAIM NSR could not be retained post-RECLAIM

Industry

Recommendation:

Support programmatic annual demonstration by South Coast AQMD showing that actual emissions remain below the cap, if needed to retain RECLAIM NSR

## Agency Responses: Requiring to Demonstrate that Emissions Remain Below Final Cap

### U.S. EPA Response:

Federal CAA 110(l) requires U.S. EPA to conduct a holistic review of the RECLAIM transition to ensure no interference with progress towards attainment and compliance with all CAA requirements

An ongoing demonstration is not the only option to meet the anti-backsliding requirement under Federal CAA 110(l)

### South Coast AQMD Response:

Proposing one-time programmatic demonstration as part of the SIP package submitted for RECLAIM transition (Late 2021/Early 2022)

Demonstration will show actual emissions below 14.5 tpd – can use future implementation dates of command-and-control rules, if needed

## Industry Comment: NSR Holding Requirement

- Pursuant to Rule 2005, facilities that were permitted after the inception of RECLAIM are required to hold RTCs equal to their PTE before the start of operation and at the beginning of each compliance year thereafter

### Industry

### Recommendation:

NSR holding requirement, on an individual facility basis or programmatically by South Coast AQMD, should be eliminated if RECLAIM NSR is not retained

Industry might support retaining the NSR holding requirement if EPA felt it was necessary to retain RECLAIM NSR

## Agency Responses: NSR Holding Requirement

**U.S. EPA Response:** Ongoing Rule 2005 holding requirement would be satisfied by retiring the total RTCs that were needed for the holding requirement

**South Coast AQMD Response:** Proposing to satisfy the ongoing Rule 2005 holding requirement with a one-time programmatic demonstration as part of the SIP package submitted for RECLAIM transition (Late 2021/Early 2022)

Remaining RTCs will be evaluated

## Industry Comment: NSR Applicability Trigger

- ※ Currently, South Coast AQMD's NSR applicability test is based on the difference between the pre-modification and post-modification PTE
- ※ U.S. EPA indicated that any revised NSR program must be equivalent to federal NSR, which does not allow the use of PTE-to-PTE for NSR applicability
  - ※ Federal NSR applicability for major modifications is based on a Baseline Actual Emissions-to-Projected Actual Emissions test or an Actual Emissions-to-PTE test
  - ※ South Coast AQMD is proposing to adopt an Actual emissions-to-PTE applicability test for modifications at major sources
  - ※ Actual Emissions-to-PTE test will result in more modifications triggering NSR requirements

### Industry Recommendation:

Baseline Actual Emissions-to-Projected Actuals Emissions may not be less stringent than PTE-to-PTE, and could sometimes be more stringent

Use of a Baseline Actual Emissions-to-Projected Actuals Emissions test would not result in backsliding

Retain existing RECLAIM NSR, making concerns with NSR changes moot

## Agency Responses: NSR Applicability Trigger

### U.S. EPA Response:

South Coast AQMD may choose how to meet federal NSR requirements and comply with SB288

However, retaining RECLAIM NSR without a RECLAIM cap and other components of the RECLAIM program is not an option for satisfying federal NSR requirements

### South Coast AQMD Response:

Proposing to use an Baseline Actual Emissions-to-PTE NSR applicability test for modifications at major sources

An Baseline Actual Emissions-to-PTE test will always be as stringent as PTE-to-PTE as required by SB288, as well as meet federal NSR requirements

Baseline Actual Emissions-to-Projected Actuals Emissions may not always be as stringent as PTE-to-PTE

Many challenges with adopting a Baseline Actual Emissions-to-Projected Actuals Emissions test:

- Difficult to calculate and verify excludable demand growth emissions
- Maximum projected emissions are not enforceable

## Industry Comment: Methodology for Calculating Required Offsets

- Currently the amount of offsets required are determined according to the difference between the pre-modification and post-modification potential to emit (PTE)
- U.S. EPA indicated that the offsetting requirement for major sources under any revised NSR program will need to be based on the difference between pre-modification actual emissions and post-modification PTE

Industry  
Recommendation:

Retain existing RECLAIM NSR since changing offsetting calculation would increase the amount of offsets needed

23

## Agency Responses: Methodology for Calculating Required Offsets

### U.S. EPA Response:

Reaffirmed that offsetting for federal major sources must be determined according to the difference between pre-modification actual emissions and post-modification PTE

### South Coast AQMD Response:

Still working with U.S. EPA on potential options and initial proposals

Proposing a two tier approach to calculate the amount of offsets required:

- PTE-to-PTE if certain conditions are met; or
- Actual-to-PTE for all other situations

Use of hierarchy to determine the amount of offsets required is still pending confirmation from U.S. EPA



## Industry Comment: Use of South Coast AQMD Internal Bank to Satisfy NSR Offsets

- South Coast AQMD proposed to allow former RECLAIM facilities to pay a fee to access the offsets in the internal bank
- U.S. EPA has some initial reservations about the quality of the bank offsets in the internal bank
  - Although, the offsets are tracked and accounted based on SIP approved Regulation XIII

### Industry

#### Recommendation:

If RECLAIM NSR program is replaced, former RECLAIM facilities should have access to the internal bank at a reasonable fee

Need to explore other options to generate offsets, such as mobile source credits

## Agency Responses: Use of South Coast AQMD Internal Bank to Satisfy NSR Offsets

### U.S. EPA Response:

Use of offsets from South Coast AQMD's internal bank could would require an additional review of the source of offsets

Challenging to use mobile source credits to offset stationary sources – problem satisfying the permanency criteria

### South Coast AQMD Response:

A variety of options to reduce the demand and increase the supply of offsets are being considered to address concerns with availability of offsets

Exploring potential use of offsets from the existing South Coast AQMD Internal Bank to establish a new Large Source Bank

## On-Going Efforts and Next Steps

- Monthly RECLAIM Working Group and Regulation XIII New Source Review Working Group meetings
- Continue rulemaking activities
- Continue working with U.S. EPA, CARB, and stakeholders on addressing NSR issues
- Update RECLAIM Transition Plan

# Contacts

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